CORRIGENDUM

Imphal, 21st February, 2020

Subject: NIT Manipur TEQIP-III advertisement No.TEQIP-III/2020/nitm/146 dated 05.02.2020 for the supply of GNSS Receiver/DGPS at NIT Manipur.

NITM.1/(227-TEQIP-III)/2019-20 (PART 1)(Pf)-   In partial modification to the above referred Advertisement, it is hereby notified for information to all the prospective/ potential bidders that there is some changes in the specification of items, last date of submission is extended upto 11th March 2020 and can be obtained from the institute website at www.nitmanipur.ac.in.

Revised Equipment Specification in Annexure I & II.

Other terms and conditions of the tender document will remain unaltered.

(Dr. Kh. Manglem Singh)
Registrar (i/c), NIT Manipur

Copy to:

1. PS to the Director, NIT Manipur
2. TEQIP-III, Nodal Officer (Procurement)
3. Technical Officer, NIT Manipur for uploading in website
4. CF/GF.

TECHNICAL SPECIFICATION FOR MULTI FREQUENCY DGPS

GNSS PERFORMANCE			
GNSS Antenna/ technology			Fully integrated GNSS Antenna satellites tracking systems communication Bluetooth High gain Integrated antenna with Sub-mm phase
Number of channels			220 or more (Tracking of 50 satellites or more simultaneously)
Satellite Signal tracking & Recording			GPS: L1C/A, L1C, L2C, L2E GLONASS: L1C/A, L1P, L2C/A, L2P SBAS: WASS, EGNOS, GAGAN SBAS : L1C/A BeiDou (COMPASS): B1, B2 IRNSS
MEASUREMENT PERFORMANCE & ACCURACY			
RTK technology	SmartCheck		Continuous check of RTK solution, reliability 99.99%
	Network RTK		VRS, FKP, iMAX, RTCM
	Time for initialisation		Typically 4s
Code differential	DGPS / RTCM		Typically 25cm
Real-time kinematic (GSM & RADIO)	RTK		Hz 8mm + 1ppm / V 15mm + 1ppm
Post processing	Static		Hz 3mm + 0.1ppm / V 3.5mm + 0.4ppm
COMMUNICATIONS			
Communication ports			USB/RS232 serial, Integrated Bluetooth/WiFi, Radio Modem Port
Communication protocols	RTK data protocols		OEM format/4G, CMR, CMR+, RTCM 2.2, 2.3, 3.0, 3.1, 3.2
Built-in data links	3.75G GSM or better		Integrated, Internal Antenna
	Radio modem		Integrated, Receive & transmit 1W
External data links			GSM / GPRS / UMTS / CDMA and UHF / VHF modem
MEMORY			
Data Storage			Internal Memory of Removable MicroSD card minimum 8GB and more
	Data Recording Format and Recording Rate		GNSS raw data and RINEX data | recording rate 20Hz or more
GENERAL			
User interface	Buttons & LEDs		On/Off, Function Button, Status LEDs
Data recording	Storage		Internal or Internal Removable Memory minimum 1GB
	Data type and recording rate		GNSS Raw Data upto 20Hz
Power management	Internal power supply		Exchangeable Li-Ion battery (2.6 Ah / 7.4 V)
	Operation time		6 hrs or more
Environmental	Operating Temperature		-30 to 60°C
	Drop		2mtr onto Hard Surfaces
	Dust & Water Proof		IP67 or Better
	Humidity		100%, Condensing

TECHNICAL SPECIFICATION FOR CONTROLLER

Operating System	Windows CE 6.0
Processor	512 MHz or More
Memory	512 MB DDR SDRAM or More
Internal Memory	1GB or More
Wireless connectivity	Bluetooth, WLAN
Field Application Software	For Regular Survey Works
Standard Software	Internet Explorer Mobile, File Explorer, Word Mobile, etc
Removable Battery	2nos with option for connecting external power source for long observation
Battery Charging Time	2 hours
Power	Nominal 12 V DC Range 10.5 – 28 V DC
Operating Time	6 hours or more
Operating temperature	−30 to 60° C
Dust and Water / Humidity	IP67 or Better
Display	Touch Screen, Min. 4.2 in, VGA colour TFT (640x480 pixels) with LED backlight, Sunlight-Readable
Keyboard	Hard keys, full Qwerty Keypad as well as onboard virtual keypad
Inbuilt Sensors	5 MP auto focus camera with LED flash, Integrated GPS with Geo-tagging Integrated accelerometer Integrated compass Integrated speaker and microphone with stereo headset connection
Interface	SD card slot, (USB Host), GPS connection port

TECHNICAL SPECIFICATION FOR onboard FIELD/Controller SOFTWARE

	User friendly Icon based menus for easy field operation.The software should be able to log data for all the signals tracked
Menu /Submenus	
Application Program	Surveying, Staking, COGO, Area, Two point Distance, Mesurement to line, Co-ordinate system management, Code
Feature Coding	Free Coding, The metical coding, Quick coding.Manual code entry or selection from a user defined codelists.
Icons Status	Icon indicating the current status of measure mode, setting, Battery etc.
Map Projection	Traverse Mercator, User definable UTM & country specific oblique Mercator. Lamboard, Soldner cassini, Polar Stereographic, Double stereographic, etc
	Import / Export to industry standard formats like CSV, DXF, Export CSV, DXF &	Field software must have facility for display of Points, lines, polygons captured in the field with user defined feature
Survey Map screen	codes, line styles, colours etc. Active Background maps inform of JPEG/TIFF, DXF/DWG	

TECHNICAL SPECIFICATION FOR POST-PROCESSING SOFTWARE

Operating system	Software must run on Windows 7, 8, 10
	Built in CAD platform , Support for any Level, Total Station, GNSS, Scanning
Import of raw data	Should be able to import raw data in OEM format (GPS/GLONASS reciever)as well as Rinex format, and facility to import ephimeris data from IGS stations via internet
Base-Rover Post processing of raw data	Should be able to process multi-GNSS raw data from GPS, GLONASS, etc.
Network adjustment	Should be able to post process and adjust network data by least square adjustment principle
Export	Must be capable to export data in Rinex, CAD,CSV,KML formats
Report generation	It must have facility to generate detailed post processing reports
	Should be able to handle RTK data and be able to Process RTK data. Baseline processing, Static base line Processing Should be capable of processing long baselines to upto 500km or above with sufficient occupation
Datum transformation	Capable of transferring the data from one datum to another for given set of common points with or without the knowledge of datums
Feature coding	Software should support feature coding
Surfaces	The software should be capable of surface modelling from collected data through GNSS, ETS, Digital Levels and 3D Visualisation of the same

Bill of materials (Accessories)

GNSS receiver with accessories	2nos. One Base + One Rover
Controller	1no.
Internal Rechargeable Battery	2nos. each for Base, Rover & Controllers
Quick Charger	1no. One for each Receiver and Controller
Tripod setup for Base for PP data collection and RTK base setup	2nos. One for Base and One for Rover
Light weight Carbon Fibre Survey Pole Setup for rover with quick fix tripod/bipod for stable setup during short interval data collection	1no. for Rover
Field software	1no. One for Rover Controller
Post processing software	1 license for Desktop/Laptop Computer running on Latest version of Windows

All Hardware, Softwares and Accessories should be of the single OEM only